



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Risk Assessment and Surveillance

Longitudinal Interactions of Pain and Posttraumatic Stress Disorder Symptoms in US Military Service Members Following Blast Exposure

Researchers at the Hunter Holmes McGuire Veterans Affairs Medical Center, DVBIC, and Virginia Commonwealth University conducted a longitudinal study to examine the interaction of PTSD and pain symptoms over time. Sponsored by DVBIC, this study recruited military personnel with combat-related blast exposure and co-occurring pain and PTSD symptoms ($n = 209$). Autoregressive cross-lagged analysis was used to examine longitudinal associations between self-reported pain and PTSD symptoms over a one-year period. PTSD symptoms had a particularly strong influence on subsequent pain symptoms. The best-fitting covariate model indicated that, across all points in the assessment period, pain and PTSD were significantly associated with one another. The relationship between pain and PTSD symptoms was related to older age, race, and TBI characteristics. These findings further the understanding of complex injuries among military personnel and highlight the need for comprehensive assessment and rehabilitation efforts addressing the interdependence of pain and co-occurring mental health conditions. Further studies are needed to evaluate why these variables are connected and how they impact current models of care.